

Chapter 7 - Volatile Organic Compounds

The following document represents a compilation of the District of Columbia Rules controlling volatile organic compounds which are still part of the federally enforceable District of Columbia SIP as of 3/16/98. The dates listed below in **[brackets]** indicate the DC effective date of these rules. The chart found at the end of this compilation summarizes the EPA approval actions taken on these rules.

[Numbering System in effect prior to 3/15/85]

Section 8-2:707. CONTROL OF ORGANIC COMPOUNDS

[3/1/74]

- (a) Storage of Petroleum Products. A person shall not place, store or hold in any stationary tank, reservoir or other container of more than 40,000 gallons capacity any gasoline or any petroleum distillate having a vapor pressure of 1.5 pounds per square inch absolute or greater under actual storage conditions, unless such tank, reservoir or other container is a pressure tank maintaining working pressures sufficient at all times to prevent hydrocarbon vapor or gas loss to the atmosphere, or is designed and equipped with one of the following vapor loss control devices in good working order and in operation.

- (1) A floating roof, consisting of a pontoon type or doubledeck type roof, resting on the surface of the liquid contents and equipped with a closure seal, or seals, to close the space between the roof edge and tank wall. The control equipment provided for in this paragraph shall not be used if the gasoline or petroleum distillate has a vapor pressure of 11.0 pounds per square inch absolute or greater under actual storage conditions. All tank gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.
- (2) A vapor recovery system, consisting of a vapor gathering system capable of collecting the hydrocarbon vapors and gases so as to prevent their emission to the atmosphere and with all tank gauging and sampling devices gas-tight except when gauging or sampling is taking place.
- (3) Other equipment of equal efficiency, provided such equipment is submitted to and approved by the Commissioner.

- (b) Volatile Organic Compounds or Gasoline Loading into Tank Trucks, Trailers and Railroad Tank Cars.

[3/1/74]

A person shall not load volatile organic compounds or gasoline into any tank truck, trailer, or railroad tank car from any loading facility unless such loading facility is equipped with a vapor collection and disposal system or its equivalent in good working order and in operation. When loading is effected through the hatches of a tank truck, trailer, or railroad tank car with a loading arm equipped with a vapor collecting adaptor, a pneumatic, hydraulic or other mechanical means shall be provided to force a vapor-tight seal between the adaptor and the hatch. A means shall be provided to prevent liquid drainage from the loading device when it is removed from the hatch of any tank truck, trailer, or railroad tank car, or to accomplish complete drainage before such removal.

When loading is effected through means other than hatches, all loading and vapor lines shall be equipped with fittings which make vapor-tight connections and which close automatically when disconnected.

The vapor disposal portion of the system shall consist of one of the following:

- (1) A vapor-liquid absorber system with a minimum recovery efficiency of 90 percent by weight of all the hydrocarbon vapors and gases entering such disposal system.
- (2) A variable vapor space tank, compressor, and fuel gas system of sufficient capacity to receive all hydrocarbon vapors and gases displaced from tank trucks, trailers and railroad tank cars being loaded.
- (3) Other equipment of at least 90 percent efficiency, provided such equipment is submitted to and approved by the Commissioner.

[2/26/81]

Compliance with or violation of the emission standards in this subsection (b) shall be determined in accordance with the procedures prescribed in Appendix A of 'Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals', published by the United States Environmental Protection Agency, October 1977, publication numbers EPA450/2-77-026 and OAQPS No. 1.2-082.

(c) Volatile Organic Compounds or Gasoline Transfer Vapor Control.

[3/1/74]

- (1) No person shall transfer volatile organic compounds or gasoline from any delivery vessel into any stationary storage container with a capacity greater than 250 gallons unless such container is equipped with a submerged fill pipe and unless the displaced vapors from the storage container are processed by a system that prevents release to the atmosphere of no less than 90 percent by weight of organic compounds in said vapors displaced from the stationary container location.

(A) The vapor recovery portion of the system shall include one or more of the following:

[2/26/81]

(i) A vapor return line from the storage container to the delivery vessel and system that will ensure that the vapor return line is connected before gasoline can be transferred into the container.

[3/1/74]

(ii) Refrigeration-condensation system or equivalent designed to recover no less than 90 percent by weight of the organic compounds in the displaced vapor.

(B) If a "vapor-tight vapor return" system is used to meet the requirements of this section, the system shall be so constructed as to be adapted to retrofit with an absorption system, refrigeration-condensation system, or equivalent vapor removal system, and so constructed as to anticipate compliance with Section 8-2:707 (d).

(C) The vapor-laden delivery vessel shall be subject to the following conditions:

[3/1/74; redesignated as "(i)" 2/26/81]

(i) The vapor-laden delivery vessel may be refilled only at facilities equipped with a vapor recovery system or the equivalent which can recover at least 90 percent by weight of the organic compounds in the vapor displaced from the delivery vessel during refilling.

[2/26/81]

(ii) The delivery vessel shall be leak tested by any competent person, at least once each year in accordance with the procedures prescribed in Appendix A of 'Control of Volatile Organic Compound Leaks From Gasoline Tank Trucks and Vapor Collection Systems' published by the United States Environmental Protection Agency, December 1978, publication numbers EPA-450/2-78-051 and OAQPS No. 1.2-119. Initial testing of any existing delivery vessel shall be accomplished no later than one year from the effective date of the Air Quality Control Regulations Amendment Act of 1980.

(iii) The standards for passing the leak test mentioned in clause (ii) above are that a pressure change of no more than 3 inches of water column occur in 5 minutes when the delivery vessel has been pressurized to 18 inches of water column and has been evacuated to 6 inches of water column - Any delivery vessel that fails to pass the leak test shall be immediately taken out of service and shall be kept out of service until a subsequent test demonstrates compliance

with the standards for passing the test. Whenever the delivery vehicle is in use, a clear and unequivocal certificate shall be posted, by the person responsible for conducting the test, in a conspicuous location on the delivery vessel identifying the particular delivery vessel tested and indicating compliance with the testing standards.

(iv) No person shall cause, suffer, or allow the loading or unloading of delivery vessels unless he has taken affirmative action to assure that the delivery vessel has a clear and unequivocal certificate to the effect that it has been leak tested within the past year in accordance with clause (ii) above and that the last leak test showed compliance with the standards in clause (iii) above;

[3/1/74]

(2) The provisions of this paragraph (c) shall not apply to the following:

(A) Any container having a capacity less than 2,000 gallons installed prior to promulgation of this paragraph; provided, however, said containers are equipped with submerged fill pipes.

(B) Transfer made to storage tanks equipped with floating roofs or their equivalent.

[2/26/81]

(3)

No person shall cause, suffer, or allow the operation or maintenance of any delivery vessel, or of any part of any liquid delivery system, or vapor collection and/or recovery system used or designed to be used in connection with the loading or unloading of the delivery vessel, in such a manner that it is not vapor-tight or in such a manner that there is any avoidable visible liquid leakage or liquid spillage.

[2/26/81]

(d) Control of Evaporative Losses from the Filling of Vehicular Fuel Tanks:

(1)

(A) No person shall cause, suffer, or allow the transfer of gasoline to any *vehicular fuel tank* from any stationary storage container unless the transfer is made through a fill nozzle designed, operated and maintained to:

(i). Prevent the discharge of gasoline vapors to the atmosphere from either the vehicle filler neck or the fill nozzle.

(ii) Direct the displaced vapor from the vehicular fuel tank to a system wherein at least 90 percent by weight of the organic compounds in the displaced vapors are recovered or destroyed.

(iii) Prevent vehicular fuel tank overfills and spillage.

(B) A vapor-balance system meeting the specifications set forth in subsection (d)(2) and used in compliance with subsection (d)(3) of this section shall be deemed to be in compliance with the requirements set forth in subsection (d) (1) (A) of this section.

(2) A vapor balance system shall have the following:

(A) A vapor-tight vapor return hose to conduct the vapors displaced from the vehicular fuel tank to the gasoline dispensing facility's gasoline storage tank(s).

(B) A vapor-tight seal to prevent the escape of gasoline vapors into the atmosphere from the interface between the fill nozzle and the filler neck of the vehicular fuel tank.

(C) On and after October 1, 1982, or on and after the date a fill nozzle is removed from service for repair and/or replacement and/or rebuilding, or on and after the date a new fill nozzle is brought into service, whichever date is earlier:

(i) the fill nozzle shall have a built-in no-seal no-flow feature designed to prevent the discharge of gasoline from the nozzle unless the seal described in paragraph (2)(B) above, is engaged;

(ii) the fill nozzle shall have a built-in feature designed to automatically shut-off the flow of gasoline when the pressure in the vehicular fuel tank exceeds 10 inches of water gauge; and

(iii) the vapor return line shall be equipped with a device that will automatically shut-off the flow of gasoline through the fill nozzle when gasoline circulates back from the fill nozzle through the vapor hose to the facility's gasoline storage tank.

(D) On and after October 1, 1982, or on and after the date a new gasoline dispensing system is brought into service, whichever date is earlier:

(i) the vapor return hose shall be no longer than 9 feet in length unless the hose is attached to a device designed to keep the hose out of the way of vehicles (when the nozzle is not in use) and to drain the hose of any collected or condensed gasoline; and

(ii) the gasoline dispensing system shall be equipped with a device designed to prevent the dispensing Of gasoline at any rate greater than 8 gallons per minute.

(E) Until December 1, 1981, the Mayor is authorized to grant any person a waiver from the deadlines contained in clauses © and (D) of this paragraph:

Provided, That the Person granted such waiver enters into a legally binding agreement with the Mayor providing for:

(i) compliance no later than July 1, 1982, with respect to all gasoline dispensing facilities under his control; and

(ii) a schedule for phasing in such compliance.

(3) No person shall cause, suffer, or allow the use by any person of a fill nozzle which is a part of the vapor-balance system unless the system is maintained in good repair, and unless proper operating practices, including, but not limited to the following practices are followed:

(A) Draining the vapor return hose as often as is necessary, but at least once each operating day, of any collected or condensed gasoline.

(B) Waiting as long as is necessary, but at least ten seconds after the shut-off all the fuel, before disconnecting the nozzle from the fill neck, in order to balance the pressure between the vehicular fuel tank and the facility's gasoline storage tank.

(C) After each fuel delivery, placing the vapor return hose on an area where vehicles will not ride over the vapor return hose.

(4) If it is demonstrated to the satisfaction of the Mayor, that it is impractical to comply with the provisions of subsection (d)(1) of this section, as a result of the vehicle fill neck configuration, location, or other design features of a class of vehicles, the provisions of this section shall not apply to such vehicles. However, in no case shall such configuration exempt any gasoline dispensing facility from installing and using in the most effective manner, a system required by subsection (d)(1) of this section.

(5) No person shall cause, suffer, or allow the transfer of gasoline to any vehicular fuel tank from any stationary storage tank, unless the transfer is made through a fill nozzle designed to automatically shut-off the transfer of gasoline when the vehicular fuel tank is full or nearly full.

(6) No person shall cause, suffer, or allow any additional transfer of gasoline to any vehicular fuel tank from a stationary storage tank after the dispensing system has automatically shut-off the transfer of gasoline by virtue of the vehicular fuel tank being full or nearly full.

(7) The operator of a gasoline dispensing facility shall take such actions as may be necessary to insure that all parts of the system used at the facility for compliance with this subsection (d) are maintained in good repair, and to insure that any person, whether attendant, customer, or other, who uses the facility, does so in accordance with proper operating practices and otherwise in compliance with the requirements of this subsection (d). For purposes of this subsection (d), "operator" means any person who leases, operates, manages, supervises, or controls directly or indirectly a gasoline dispensing facility.

[3/1/74]

(e) Dry Cleaning Operation:

(1) No person shall operate a dry cleaning operation* using other than perchloroethylene, 1, 1, 1-trichloroethane, or saturated halogenated hydrocarbons unless the uncontrolled organic emissions from such operation are reduced at least 85 percent; provided that dry cleaning operations emitting less than three pounds per hour and less than 15 pounds per day of uncontrolled organic materials are exempt from the requirement of this section.

(2) If incineration is used as a control technique, 90 percent or more of the carbon in the organic emissions being incinerated must be oxidized to carbon dioxide.

(3) Any owner or operator of a source subject to this section shall achieve compliance with the requirements of paragraph (1) (1) of this section by discontinuing the use of photochemically reactive solvents no later than April 1, 1974, or by controlling emissions as required by paragraphs (1) and (2) of this section no later than May 31, 1975.

[3/1/74]

(f) Organic Solvents:

(1) No person shall discharge into the atmosphere more than 15 pounds of photochemically reactive solvents in any one **day**, nor more than 3 pounds in any one hour, from any article, machine, equipment or other **contrivance** unless the uncontrolled organic emissions are reduced **by** at least 85 percent.

(2) No person shall discharge into the atmosphere more than 40 pounds of non-photochemically reactive solvents in any one day, nor more than 8 pounds in any one hour, from any article, machine, equipment or other contrivance, unless the uncontrolled organic emissions are reduced by at least 85 percent. Dry cleaning operations are exempt from the requirements of this paragraph.

[7/2/72; citation revised 3/1/74]

(g) Pumps and Compressors. All pumps and compressors handling volatile organic compounds shall have mechanical seals or other equivalent equipment approved by the Commissioner.

[7/2/72; citation revised 3/1/74]

(h) Waste Gas Disposal from Ethylene Producing Plant. No person shall cause, suffer, or allow the emission of a waste gas stream from any ethylene producing plant, or source utilizing ethylene as a raw material, into the atmosphere in excess of 20 pounds per 24-hour period, unless the waste gas stream is properly burned at 1,300 Fahrenheit for 0.3 of a second or longer in a direct-flame after-burner, or is removed by-a method of comparable efficiency approved by the Commissioner.

[7/2/72; citation revised 3/1/74]

(i) Waste Gas Disposal from Vapor Blow-Down Systems. No person shall emit hydrocarbon gases into the atmosphere from a vapor blowdown system, unless these gases are burned by smokeless flares, or an equally effective control device approved by the Commissioner, but this subsection shall not apply to accidental or emergency emissions of hydrocarbons needed for safe operation of equipment and processes.

[2/26/81]

(j) Solvent Cleaning- (Degreasing)

(1) On and after October 1, 1981, any person who employs solvent cleaning shall utilize a control system for such cleaning, which includes the following equipment:

(A) A container for the solvent and the articles being cleaned.

(B) A cover for the container which can be easily and conveniently used whenever it is not essential that the container be open.

(C) A facility for draining cleaned parts so that the drained solvent is returned to the container.

(D) A permanent, conspicuous, and easily readable label, which lists each of the applicable operating requirements contained in paragraph (2) of this subsection.

(2) On and after October 1, 1981, any person who employs cold solvent cleaning, if the vapor pressure of the solvent is greater than 0.6 psia at 100 degrees Fahrenheit, or if the solvent is heated above 120 degrees Fahrenheit, shall utilize one of the following control systems:

(A) A freeboard ratio* greater than or equal to 0.75; or

(B) A water cover, if the solvent is insoluble in and heavier than water; or;

(C) Any other system of equivalent control, such as a refrigerated chiller or carbon absorber of the type specified in paragraph (3)(B) of this subsection.

(3) On and after October 1, 1981, any person who employs open-top vapor cleaning or conveyORIZED cleaning, shall utilize and keep in working order.

(A) All of the following control systems:

(i) A device designed to prevent heat input to the solvent unless there is adequate coolant to condense the vapors.

(ii) A spray safety switch designed to stop solvent spray unless the degreaser is functioning properly.

(iii) A vapor level control device designed to stop heat input to the solvent if the vapor level rises above the design level.

(B) One or more of the following control systems or any other system for which it is shown that the overall emissions are reduced in weight by 85 percent:

(i) A freeboard ratio greater than or equal to 0.75.

(ii) A refrigerated chiller with the coolant at least 40 degrees Fahrenheit or less.

(iii) A carbon adsorption system with a ventilation rate of at least 50 cfm per square foot of conveyor opening area (in the case of conveyorized degreasers) or of the container opening (in the case of open-top vapor degreasers) and an exhaust concentration of no more than 25 ppm by volume of hydrocarbons.

(4) On and after October 1, 1981, any person who employs conveyorized degreasers, shall utilize both of the following control systems:

(A) Either a drying tunnel, or another means such as a rotating basket, sufficient to prevent cleaned parts from carrying out solvent liquid or vapor, and

(B) Minimized openings. Entrances and exits should silhouette work loads so that the average clearance between parts and the edge of the degreaser opening is either less than 4 inches or less than 10 percent of the width of the opening, whichever is less.

(5) On and after October 1, 1981, any person who employs solvent cleaning shall conform to the following operating requirements:

(A) The degreasing equipment and emission control equipment must be properly operated and maintained in proper working order.

(B) A person shall not allow any solvent to leak from any portion of the degreasing equipment.

(C) A person shall not store or dispose of any solvent, including waste solvent, in such a manner as will cause or allow its evaporation into the atmosphere.

(D) After distillation recovery of waste solvent, solvent residues shall not contain more than 10 percent solvent by volume.

(E) A person shall not remove or open any device designed to cover the solvent, unless such person is processing work in the degreaser or performing maintenance on the degreaser.

(F) For cold solvent cleaning, a person shall drain cleaned parts for at least 15 seconds after cleaning or until dripping ceases, whichever is longer.

(G) A person shall use only a continuous fluid stream if a solvent flow is utilized, and the pressure shall be such that it does not cause any liquid solvent to splash outside of the solvent container.

(H) Solvent agitation, where necessary, shall be attained through pump recirculation or by means of a mixer. Air agitation of the solvent bath shall not be utilized.

[2/26/81]

(k) Asphalt Operations.

Except for purposes of roofing, no person shall cause, suffer, or allow, the manufacture, mixing, storage, use, or application of cutback asphalt during the months of April, May, June, July, August, and September: Except, That in specific circumstances, when it is shown to the satisfaction of the Mayor that the above prohibition is unreasonable, liquefied asphalts containing volatile organic compounds may be manufactured, mixed, stored, used, or applied, subject to all conditions which the Mayor may impose to minimize the emissions of VOC into the atmosphere. In the determination of the unreasonableness of the prohibition of cutback asphalt, and in the determination of the conditions that the Mayor may impose to minimize the emissions of VOC, the Mayor shall take into consideration, among other factors, the following:

- (1) The need for long-life storage of the asphalt.
- (2) The lack of significant evaporation of VOC from the asphalt.
- (3) The need to use any particular type of aggregate.
- (4) The weather conditions ring the application of the asphalt.

[Numbering System in effect as of 3/15/85]

710.0 ENGRAVING AND PLATE PRINTING

710.1 Except as provided in §710.2, it shall be prohibited to operate any printing unit or perform any printing operation in an establishment coming within the description of Industry Group 2753 as stated in the 1972 Standard Industrial Classification Manual of the Federal Office of Management and Budget except in compliance with the requirements of this section.

710.2 If part or all of any printing operation involving volatile organic compound emissions is not specifically controlled by the requirements of this section then the volatile organic compound-related emission operation or part of the operation shall be governed by the other requirements of this Subtitle.

710.3 This section applies only to the emissions of volatile organic compounds; all provisions of this Subtitle other than those restricting the emissions of volatile organic compound apply to the operations regulated by this section.

710.4 The utilization of inks, wiping solutions and dampening solutions in connection with printing units must be in compliance with the limits on the percentage content of volatile organic compounds of the inks, wiping solutions and dampening solutions for the respective types of printing units and subject to the time deadlines specified in Appendix No. 3 to this Subtitle.

710.5 Ink usage in connection with all forms of intaglio printing shall be minimized to the extent feasible by routing the inking cylinders or other techniques.

710.6 Volatile organic Compound emissions from any heatset oven shall be reduced by ninety percent (90%) through the use of a control device, except in the case of printing units using water-based solvents in the ink used on them.

710.7 The owner or operator of sources to which §710.5 applies, in order to comply with the requirements of that section, shall adhere to the increments of progress contained in the following schedule:

- (a) Submit to the Mayor final plans for the control devices no later than December 31, 1985;
- (b) Award contracts for the control devices no later than December 31, 1986;
- (c) Complete on-site construction or installation of the control devices no later than November 30, 1987; and
- (d) Achieve final compliance with §710.5 no later than December 31, 1987.

710.8 Alternate volatile organic compound emission reduction systems may be used to attain compliance with §§710.3 and 710.5 in lieu of the specific requirements stated in those sections, provided that:

- (a) The alternate volatile organic compound reduction system(s) is demonstrated to have at least equivalent results in limiting emissions of volatile organic compounds as application of the requirements of those sections; and
- (b) The alternate system(s) shall be approved by the Mayor.

710.9 All containers holding volatile organic compound containing materials shall be open only when necessary and openings shall be restricted to the extent feasible.

710.10 The leaking of any solvent or solvent-containing materials from any printing unit or associated equipment shall be prohibited.

710.11 The storage or disposal of any solvent or solvent-containing material, including waste material, in a manner that will cause or allow its evaporation into the atmosphere shall be prohibited.

710.12 To the greatest extent feasible, persons operating printing units and associated equipment shall minimize their use of volatile organic compound-containing materials by restricting wasteful usage and by replacing the material with emulsions or other materials.

710.13 Any person owning or operating an establishment to which §710.3 is applicable, but within which one (1) or more printing units is demonstrated to be unable to comply or cannot feasibly comply with the requirements of §710.3, may bring the establishment into compliance by reducing volatile organic compound emissions from other printing units within the establishment as follows:

- (a) In a ratio of five (5) units of reduced emissions for each one (1) unit of excess emissions for operations during the months of April, May, June, July, August and September; and
- (b) In a ratio of one (1) unit of reduced emissions for each one (1) unit of excess emissions for operations during the months of October, November, December, January, February and March; and
- (c) Provided, that the owner or operator demonstrates to the Mayor that:
 - (1) the reduction ratio is met by the proposed trade;
 - (2) the Mayor approves the proposed trade; and
 - (3) the proposed trade is legally enforceable against the owner and operator of the establishment.

